

## Comparing Ethical Content Ratings of Text and Video Versions of Stories

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### Abstract:

The *Rating Ethical Content System* (RECS) provides a systematic method for rating the positive content of stories, based on the Four Process model of ethical behavior (Rest, 1983): ethical sensitivity, ethical judgment, ethical focus and ethical action. We present data from an experiment in which college students and children rated the ethical content of a video version or a book version of the same story. We used the children's stories *Arthur's Computer Disaster* and *The Trouble with Friends*. For Arthur, in comparison to the undergraduates children rated sensitivity significantly higher in book and video and focus and action significantly higher in the video. For Bears, in comparison to the undergraduates the children rated every component higher for video and book presentations except for sensitivity. When composite scores were computed for all four components, there were significant differences between children and adults for the Arthur video, Bears book and Bears video. Given that children rated the stories higher on nearly every component, we speculate that age may matter in determining what is morally salient.

### Summary

#### Introduction

Media ratings systems that evaluate negative concepts such as violence, sexuality and language are the norm. But how do parents and educators select positive, developmentally appropriate media for children? The Rating Ethical Content System (RECS) is a reliable rating tool for parents and educators trying to regulate children's media use. Thus far it has been used only for rating books. Here we test RECS for video stories, comparing video and book versions of the same story.

There is contradictory evidence in the literature in regarding the use of an audiovisual format rather than a written format to enhance learning. On the one hand, research shows that high school students retained less information from audio than from text presentation (Koroghlanian and Klein, 2004). On the other hand, other research has found that people were better able to retain information about polio vaccines if it was presented in the form of an animated cartoon, than if it was presented in the form of plain text (Leiner, Handal, & Williams, 2004). We expect there may be a difference in text versus video presentation, especially for children.

#### Method Method

*Participants.* Participants were 37 undergraduates (54% female, 86% Euro Americans) from a private Midwestern university who participated for course credit. The college student

sample results are described here. Additional data will be collected with children ages 10-12 in June.

*Procedure.* Participants read a practice story, a children's book and watched a children's video. After each story, they answered questions about the story on the computer. Block randomization was used to assign participants to groups, where different groups watched the video and read the book in different orders.

*Stories.* We used two different stories, each in book and video format, where the plot was almost identical in the two formats. One story was *Arthur's Computer Disaster*, in which the main character learns about telling the truth and obeying his mother's instructions. The other story was *Trouble with Friends*, where the main character meets a new friend and they learn to compromise after having a disagreement.

*Scale.* RECS-Short Form consists of one open-ended question about the story ("What is the theme of the story?") and multiple-choice items that include general questions about the story (e.g., select stereotypes present in the story) as well as questions about the ethical content of the story (questions about the four processes). Here we report on the responses to the four processes, each measured with 10 questions. The four process subscales used a 3-point Likert-type scale (0 = no evidence/not sure, 2 = present, 3 = dominant).

## Results

For Arthur, in comparison to the undergraduates children rated sensitivity significantly higher in book and video and focus and action significantly higher in the video. For Bears, in comparison to the undergraduates the children rated every component higher for video and book presentations except for sensitivity. When composite scores were computed for all four components, there were significant differences between children and adults for the Arthur video, Bears book and Bears video. Given that children rated the stories higher on nearly every component, we speculate that age may matter in determining what is morally salient. More details are below.

## Powerpoint Slides (converted)

### Documented Developmental Differences in Story Comprehension

#### ■ Recall

(Collins, 1983; Perfetti, 1985; van den Broek, Lorch & Thurlow, 1997)

#### ■ Theme comprehension

(Goldman, Reyes & Varnhagen, 1984; Johnson, 1984; Lehr, 1988; Taylor 1986)

#### ■ Moral theme comprehension

(Narvaez et al, 1998; 1999; 2005)

### Causes of Developmental Differences in Story Comprehension

#### ■ Reading ability

#### ■ Background knowledge (to fill in missing information)

#### □ General world knowledge

#### □ Cultural knowledge

#### ■ Socio-moral development

### Story Medium Effects

#### □ Paivio's dual coding hypothesis (1971)

□Children remember different things from fictional stories (*Beentjes, Voojis & van der Voort, 1993*)

■*More scenes, fewer errors with video*

■*More character specifics and detail with written text*

□Children tend to remember more content of stories from news presented audio-visually than news presented in print (*van der Molen & van der Voort, 1997*)

### Rating Ethical Content

■Rating Ethical Content System (RECS)

□Based on Rest's Four-Component Model

■Pilot RECS study shows mixed developmental trends for written stories (Gomberg et al., 2005)

■Current Study Question: Are there medium effects for popular children's stories?

□Book version

□Video version

## METHOD

### Participants

■55 children

□ages 11-13, 32 female, 76.4% European American

■39 undergraduates

□87% ages 19-24, 22 female, 76.9% European American

### Materials

Two stories in book and video form:

■*Arthur's Computer Disaster*

-Arthur uses the computer without permission and seems to break it. Theme: Tell the truth and obey parental instructions

■*Berenstain Bears and the Trouble with Friends*

-Sister makes a new friend but does not like it when she doesn't get her way. Theme: Friendship is a matter of give and take.

### Procedure

■Each participant read/saw one version of each story

■Counterbalanced to control for order effects

Group 1	Group 2	Group 3	Group 4
Arthur Video	Arthur Book	Bears Video	Bears Book

Bears Book	Bears Video	Arthur Book	Arthur Video
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- Watch video / read or listen to story being read
  - Write the theme of the story
  - Rate the ethical content of the story
  - ☐ 4 processes (sensitivity, judgment, focus, action)
  - These processes were not labeled in the questionnaire
  - ☐ 8 questions per process, presented together
  - ☐ Likert scale
  - Did the main characters in the story....
  - I don't think so/I saw it/I saw it a lot
- 0                      1                      2

<b>ETHICAL SENSITIVITY</b>
<b>Did the main characters in the story:</b>
1. care about other characters' feelings?
2. notice what other characters' needs were?
3. notice things that were wrong or that hurt others?
4. show their feelings in a way that didn't hurt other characters or things?
5. listen to and take to heart what other characters said?
6. understand or try to understand other characters' thoughts and opinions?
7. understand or try to understand characters who were different or from different cultures?
8. act like a good friend?

<b>ETHICAL JUDGMENT</b>
<b>Did the main characters in the story:</b>
1. understand or try to understand the problem before deciding what to do?
2. think about how others might be upset by their choices, actions or decisions?
3. think about doing the right thing?
4. think about their decisions afterwards?
5. follow or try to follow the rules?

6. Were the main characters in the story positive or optimistic about solving the problem?
7. try to do things that helped the neighborhood or community?
8. want things to be fair for everyone?

### **ETHICAL FOCUS**

#### **Did the main characters in the story:**

1. show good self-control over their own behaviors?
2. work with other characters on moral goals?
3. Were the main characters in the story interested in helping others?
4. think they really could solve the problem or conflict?
5. follow through on promises and agreements?
6. Were the main characters in the story good, or did they try to be good and do the right thing even when it was easier to be bad?
7. try to be careful with resources?
8. try to be positive?

### **ETHICAL ACTION**

#### **Did the main characters in the story:**

1. fix or try to fix problems or conflicts without hurting other characters or things?
2. When someone was picked on, try to stop it?
3. try to help other characters?
4. try to change rules that were unfair?
5. make a plan to solve a problem or conflict?
6. follow through on a moral goal even when something got in the way and plans were changed?
7. not give up on solving the problem or conflict even when it was hard?
8. Was the main characters in the story brave when helping others or solving a problem or conflict?

### Scoring

#### ■Theme

- ☐ Credited for gist of theme
- Ratings
- ☐ 8 questions per component
- ☐ Responses added together by component
- I don't think so/I saw it/I saw it a lot
 

0
1
2
- ☐ Maximum 16 points per component

#### Procedural Differences

	Children	Undergraduates
<b>Protocol</b>	On Paper	On Computer
<b>Questions</b>	<i>Theme</i>	<i>Theme</i>
	<i>Rating Ethical</i>	<i>Rating Ethical</i>
		Rating Unethical
		Identify virtues
		Identify stereotypes

#### Results: Theme Generation

Correct moral theme

Group	Arthur Video	Arthur Book	Bears Video	Bears Book
Children				
Undergrad	100%	100%	100%	100%

#### Internal Reliability (components added together) *Cronbach's alpha*

Group	Arthur Video	Arthur Book	Bears Video	Bears Book
Children	.80	.75	.85	.84

Undergrad	.91	.91	.76	.93
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Reliability: Children

<b>Cronbach's Alpha</b>	<b>Arthur</b>		<b>Bears</b>	
	Book	Video	Book	Video
Sensitivity	<b>.39</b>	.65	.73	.67
Judgment	<b>.26</b>	<b>.46</b>	.56	<b>.26</b>
Focus	<b>.39</b>	.51	<b>.28</b>	.55
Action	.54	<b>.32</b>	.72	.52

Reliability: Undergrads

<b>Cronbach's Alpha</b>	<b>Arthur</b>		<b>Bears</b>	
	Book	Video	Book	Video
Sensitivity	.74	.84	.86	.80
Judgment	.68	.83	.90	<b>.36</b>
Focus	.95	.81	.70	<b>.36</b>
Action	.80	.83	.734	.62

**Means: Arthur's Computer Disaster**

<b>*p&lt; .05 significant difference</b>	<b>Children</b>	<b>Undergraduates</b>
<b>Sensitivity: BOOK*</b>	<b>6.14 (2.15)</b>	<b>3.19 (2.69)</b>
<b>VIDEO*</b>	<b>5.87 (2.76)</b>	<b>3.23 (3.05)</b>
<b>Judgment: BOOK</b>	<b>4.96 (1.94)</b>	<b>4.76 (2.61)</b>
<b>VIDEO</b>	<b>5.00 (2.34)</b>	<b>4.06 (3.00)</b>

<b>Focus: BOOK</b>	<b>4.91 (4.06)</b>	<b>4.67 (4.07)</b>
<b>VIDEO*</b>	<b>5.06 (2.43)</b>	<b>1.17 (1.86)</b>
<b>Action: BOOK</b>	<b>6.70 (2.44)</b>	<b>5.62 (3.01)</b>
<b>VIDEO*</b>	<b>6.10 (2.88)</b>	<b>3.06 (2.86)</b>

For Arthur, in comparison to the undergraduates children rated sensitivity significantly higher in book and video and focus and action significantly higher in the video.

Means: Berenstain Bears and the Trouble with Friends

<b>*p&lt; .05 significant difference</b>	<b>Children</b>	<b>Undergraduates</b>
<b>Sensitivity: BOOK</b>	<b>5.79 (2.72)</b>	<b>5.24 (3.15)</b>
<b>VIDEO</b>	<b>5.82 (2.77)</b>	<b>5.38 (2.87)</b>
<b>Judgment: BOOK*</b>	<b>4.83 (2.22)</b>	<b>2.65 (3.14)</b>
<b>VIDEO*</b>	<b>5.41 (1.89)</b>	<b>2.29 (1.52)</b>
<b>Focus: BOOK*</b>	<b>4.00 (1.73)</b>	<b>2.41 (2.09)</b>
<b>VIDEO*</b>	<b>5.86 (2.49)</b>	<b>2.10 (1.41)</b>
<b>Action: BOOK*</b>	<b>5.34 (2.78)</b>	<b>3.06 (2.68)</b>
<b>VIDEO*</b>	<b>5.86 (2.47)</b>	<b>2.38 (1.91)</b>

For Bears, in comparison to the undergraduates the children rated every component higher for video and book presentations except for sensitivity.

Means Across Medium: Children

<b>Arthur's Computer Disaster</b>				<b>Berenstain Bears and the Trouble with Friends</b>			
<b>Sens</b>	<b>Judg</b>	<b>Focus</b>	<b>Action</b>	<b>Sens</b>	<b>Judg</b>	<b>Focus</b>	<b>Action</b>



<b>Book</b>	<b>6.14</b> (2.15) n=21	<b>4.96</b> (1.94) n=23	<b>4.91</b> (2.07) n=23	<b>6.70</b> (2.44) n=23	<b>5.79</b> (2.72) n=29	<b>4.83</b> (2.22) n=29	<b>4.00</b> (1.73) n=29	<b>5.34</b> (2.78) n=29
<b>Video</b>	<b>5.87</b> (2.76) n=30	<b>5.00</b> (2.34) n=32	<b>5.06</b> (2.44) n=32	<b>6.10</b> (2.09) n=31	<b>5.82</b> (2.77) n=22	<b>5.41</b> (1.89) n=22	<b>5.86</b> (2.49) n=22	<b>5.86</b> (2.47) n=22

### Means Across Medium: Undergrads

	Arthur's Computer Disaster				Berenstain Bears and the Trouble with Friends			
	Sens	Judg	Focus	Action	Sens	Judg	Focus	Action
<b>Book</b>	<b>3.19</b> (2.69) n=21	<b>4.76</b> (2.60) n=21	<b>4.67</b> (4.07) n=21	<b>5.62</b> (3.01) n=21	<b>5.24</b> (3.15) n=17	<b>2.65</b> (3.14) n=17	<b>2.41</b> (2.09) n=17	<b>3.06</b> (2.68) n=17
<b>Video</b>	<b>3.28</b> (3.05) n=18	<b>4.06</b> (3.00) n=18	<b>1.17</b> (1.86) n=18	<b>3.06</b> (2.86) n=18	<b>5.38</b> (2.87) n=21	<b>2.29</b> (1.52) n=21	<b>2.10</b> (1.41) n=21	<b>2.38</b> (1.91) n=21

### Composite Score Differences (maximum score possible: 64)

	<b>Arthur Book</b>	<b>Arthur Video**</b>	<b>Bears Book*</b>	<b>Bears Video**</b>
Children	22.48 (6.61) n=21	22.21 (7.75) n=29	19.85 (7.45) n=26	24.05 (6.99) n=21
Undergrad	18.24 (9.63) n=21	12.23 (8.07) n=17	14.18 (9.24) n=16	12.14 (3.21) n=21

\*p<.05; \*\*p<.001

When composite scores were computed for all four components, there were significant differences between children and adults for the Arthur video, Bears book and Bears video. Given that children rated the stories higher on nearly every component, we speculate that age may matter in determining what is morally salient.

### Discussion

- Theme generation results followed developmental trend
  - Rating results did not follow developmental trend
  - Undergraduates rated the stories lower than the children on virtually all components
- Why were undergraduate ratings lower?
- Moral significance may vary with age

- Salient moral problems for younger age may be insignificant for older age
- Undergraduates had additional tasks that may have influenced their ratings

Thanks to many students and former students

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